



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/773,139 | 01/31/2001 | Hernan G. Otero | 21710-68377 | 5404 |

28062 7590 03/14/2005

BUCKLEY, MASCHOFF, TALWALKAR LLC
5 ELM STREET
NEW CANAAN, CT 06840

EXAMINER

BORLINGHAUS, JASON M

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

3628

DATE MAILED: 03/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

JB

Office Action Summary

Application No.

09/773,139

Applicant(s)

OTERO ET AL.

Examiner

Jason M. Borlinghaus

Art Unit

3628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 21 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8,9,19-23 and 28-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8,9,19-23 and 28-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 8– 9, 19, 20 – 21, 23 and 29 rejected under 35 U.S.C. 103(a) as being unpatentable over Kane (US Patent 6,317,728) in view of Satow (US Patent Pub. 2004/0024690).

Regarding Claim 8 and 23, Kane discloses an apparatus/article for computerized trading comprising:

- a first algorithm plug-in (agent) for implementing a trading strategy ("rules and logic which evaluate market and specific equity behaviors") (see col. 7, lines 9-12),

Art Unit: 3628

- a second plug-in (agent) for implementing a trading strategy ("rules and logic which evaluate market and specific equity behaviors") (see col. 7, lines 9-12),
- an engine (executing device - figure 1, 11) for providing service to said first and second plug-ins, whereby said first and second plug-ins are implemented in said engine in order to execute a trade (see col. 5, lines 45-55),
- a third algorithm plug-in (col. 7, lines 9-12),
- a fourth market plug-in (see col. 7, lines 9-12), and
- whereby either of said third or fourth plug-ins (agents) may be substituted ("update of trading rules and settings") for either said first plug-in or second plug-in respectively, in said engine, in order to execute a trade (see col. 5, lines 45-55).

Kane does not teach an apparatus for computerized trading comprising:

- wherein said second market plug-in implements a first limit on trading volume applicable in a first market and said fourth market plug-in implements a second limit on trading volume applicable in a second market, the second limit on trading volume being different from the first limit on trading volume.

Satow discloses an apparatus for computerized trading comprising:

- wherein said plug-in (component) implements a limit on trading volume (volume limiting) applicable in a market. ("It further comprises a volume

limiting component configured to receive a trade order indicating a number of shares to be traded, determine a limit for a number of shares to be traded, and reject the trade order based on whether the number of shares to be traded is equal to or greater than the determined limit." – see paragraph 0009).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Kane by incorporating an algorithm plug-in that implements trading volume limits, as was done by Satow, to protect market liquidity and minimize effect on market prices (see Satow, paragraph 0005 – 0007).

Regarding Claim 9, Kane discloses an apparatus wherein said first and third algorithm plug-ins (agents) implement trading strategies selected from a group consisting of: Short Sell (see col. 19, lines 43-45).

Regarding Claim 19, further method claim would have been obvious from apparatus/article Claims 1 and 23 rejected above and is therefore rejected using the same art and rationale as outlined above.

Regarding Claim 20 and 21, further method claim would have been obvious from apparatus/article Claim 9 rejected above and are therefore rejected using the same art and rationale as outlined above.

Regarding Claim 29, Kane discloses a method for computerized trading wherein a first one of said plug-ins implements an algorithm and a second one of said plug-ins implements a second algorithm, the second algorithm being different from the first

Art Unit: 3628

algorithm. (“...all agents represent different buy and sell rules...” – see col. 5, lines 10 - 11).

Kane does not teach a method for computerized trading wherein a first one of said market plug-ins implements a first limit on trading volume and a second one of said market plug-ins implements a second limit on trading volume, the second limit being different from the first limit.

Satow discloses a method for computerized trading wherein a plug-in (component) implements a first limit on trading volume (voting limit). (“It further comprises a volume limiting component configured to receive a trade order indicating a number of shares to be traded, determine a limit for a number of shares to be traded, and reject the trade order based on whether the number of shares to be traded is equal to or greater than the determined limit.” – see paragraph 0009).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Kane by incorporating an algorithm plug-in that implements trading volume limits, as was done by Satow, to protect market liquidity and minimize effect on market prices (see Satow, paragraph 0005 – 0007).

Regarding Claim 36, further apparatus claim would have been obvious from method Claim 29 rejected above and is therefore rejected using the same art and rationale as outlined above.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kane in view of Satow, as in Claim 19, and in further view of Barber (U.S. Patent 6,173,292).

Art Unit: 3628

Regarding Claim 22, Kane discloses a computerized trading method as relied upon in Claim 19 above.

Kane does not teach that the method further comprises of a step on initiating a recovery mechanism in the event of system failure.

Barber discloses a computerized system that does initiate a recovery mechanism in the event of system failure (col. 4, lines 65+).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Kane by incorporating a recovery mechanism in the event of system failure, as was done by Barber, to protect against data loss.

Claims 28 and 35 rejected under 35 U.S.C. 103(a) as being unpatentable over Kane in view of The Handbook of Investment Technology (Merz, K.J. & Rosen, J. *The Handbook of Investment Technology*. McGraw Hill, 1997, p. 168 – 169.

HG.4515.5.H36), herein referred to as The Handbook.

Regarding Claim 28, Kane discloses a method for computerized trading, comprising:

- providing a plurality of algorithm plug-ins, each of the algorithm plug-ins for implementing a respective trading strategy from a plurality of trading strategies, all of the trading strategies being different from each other.
("The securities trading system according to the invention may further include a plurality of agents, each agent operating in response to a dedicated one of the buy/sell rules, and wherein each of the agents has a

respective input for commonly receiving the buy/sell data.” – see col. 3, lines 10 –14). (“...all agents represent different buy and sell rules...” – see col. 5, lines 10 - 11);

- providing a plurality of market plug-ins (agents) for implementing rules (“rules and logic which evaluate market and specific equity behaviors” - see col. 7, lines 9-12) in a plurality of markets, all of the markets being different from each other (“...communicating with at least one securities exchange...” – see col. 3, line 23 – establishing that the Kane’s trading system can operate in several markets);
- configuring an engine with the selected one of the algorithm plug-ins and with the selected one of the market plug-ins, the engine being for providing to the selected one of the algorithm plug-ins access to market data (“...a data acquisition system having an input communicating with at least one securities exchange for receiving buy/sell data...” – see col. 3, lines 23 – 24) and for sending orders on behalf of the selected one of the algorithm plug-ins (“...the agents having outputs communicating with the securities exchange for executing the buy/sell orders...” – see col. 3, lines 33 – 35) and for receiving notification of executions of orders on behalf of the selected one of the algorithm plug-ins. (“The system supports alphanumeric paging to pagers and PCS phones, enabling the remote notification of executed trades, account balances, etc.” – see col. 12, lines

2 – 4 – establishing that Kane's trading system receives notification of executed trades); and

- using the configured engine to carry out trades in accordance with the trading strategy implemented by the selected one of the algorithm plug-ins and in accordance with market rules implemented by the selected one of the market plug-ins. ("Generally, all agents make a recommendation as to the disposition of a respective security and/or commodity and a vote is taken of all decisions of the respective agents by a voting algorithm contained e.g. in the decision logic. The result of the vote is transmitted via one of the "buy long" data channel or the "sell short" data channel, and the decision is executed in the executing device ..." – see col. 5, lines 45 – 55).

Kane does not teach a method for computerized trading, comprising:

- providing market plug-ins, each market plug-ins for implementing rules for a respective market;
- selecting one of the algorithm plug-ins; and
- selecting one of the market plug-ins.

The Handbook discloses:

- providing market plug-ins (compliance module), each market plug-in (module) for implementing rules for a respective market. ("To accomplish this, each of the orders must be compared on input against a set of decision rules in the form of defined restrictions for the specific

securities...Merrin Financial's CompAlert product is the most widely installed vendor solution for on-line compliance checking although other products such as McGregor's Predator and Longview's LandMark have well developed compliance modules...Check that fund trades do not violate their prospectus limitations or SEC rules." – see p. 168 – 167).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Kane to allow users to select algorithm and market plug-ins themselves rather than leaving the selection process up to Kane's voting process. This would allow users to implement the plug-ins they wanted to implement, following hunches, which may have been contrary to the voting process.

Furthermore, it would have also been obvious to one of ordinary skill in the art at the time the invention was made to have modified Kane to incorporate a market plug-in, as was disclosed by The Handbook, to ensure that proposed trades did not violate rules of the market.

Regarding Claim 35, further apparatus claim would have been obvious from method Claim 28 rejected above and is therefore rejected using the same art and rationale as outlined above.

Claim 30, 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kane in view of The Handbook, as in Claim 28, and in further view of The VNR Investor's Dictionary, (Brownstone, D.M. & Franck, I.M., *The VNR Investor's Dictionary*. N.Y., Van Nostrand Reinhold Company, 1981. p 150 & 292. HG4513.B76), herein

Art Unit: 3628

referred to as VNR, and *The Times* (Armstrong, P., *Exchanges Closer to Single Stock Market. The Times* (September 24, 1999) p.33), herein referred to as *The Times*.

Kane discloses a method for computerized trading wherein there are a plurality of trading strategies implemented respectively by said algorithm plug-ins ("...all agents represent different buy and sell rules..." – see col. 5, lines 10 - 11) and that the algorithm plug-ins include:

(d) a short selling strategy (see col. 19, lines 43-45).

Kane does not teach that the algorithm plug-ins comprise at least two/three/four of the group of trading strategies consisting of:

(a) a volume-weighted-average-price strategy;

(b) a ratio strategy in which a first instrument is bought and a related instrument is sold in response to a certain ratio between respective prices of the first instrument and the related instrument;

(c) a hedging strategy;

(e) a stop loss strategy;

(f) an "iceberg" strategy in which a part that is less than all of an order is sent to market at any given time; and

(g) an auto trader strategy to determine whether a trade is to be sent to market or sold from an account.

VNR discloses trading strategies consisting of:

(c) a hedging strategy. ("In the securities or commodities markets, hedging is the simultaneous execution of present and future transactions in the hope of minimizing risk." – see page 150); and

(e) a stop loss strategy. ("A securities order carrying instructions to sell specified securities at the point where their market value declines to a stated price" – see page 292).

The Times discloses a trading strategy consisting of:

(f) an "iceberg" strategy in which a part that is less than all of an order is sent to market at any given time. ("... 'iceberg orders', by which fund managers wanting to sell a big line of stock can drip-feed it into the market to prevent depressing the price.." – see page 33).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Kane by incorporating algorithms such as a short sell strategy, a hedging strategy, a stop loss strategy and an "iceberg strategy" as established by Kane, VNR and The Times to allow the algorithm plug-in to implement common trading strategies.

Regarding Claim 37 - 39, further apparatus claims would have been obvious from method Claim 30 - 32 rejected above and are therefore rejected using the same art and rationale as outlined above.

Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kane in view of The Handbook, as in Claim 28, and in further view of Freeny (US Patent 6,594,643).

Regarding Claim 33, Kane discloses a method of computerized trading with an algorithm plug-in.

Neither Kane nor The Handbook teaches a method of computerized trading further comprising parameterizing the selected one of the algorithm plug-ins to execute at least one trade.

Freeny discloses a method of computerized trading further comprising parameterizing ("predetermined criterion entered into the individual trading computer by an individual via the input device" – see col. 2, lines 53 – 59) the selected one of the algorithm plug-ins to execute at least one trade. ("The predetermined trading criteria include instructions, such as buy and sell orders, or algorithms capable of being used to analyze investment data to generate a trade request to buy and/or sell one or multiples of an investment item or products." – see col. 3, lines 22 – 26).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Kane and The Handbook by incorporating the ability for parameterizing the system's algorithm plug-ins and allowing the user to execute at least one trade based upon those algorithm plug-ins, as was done by Freeny, to allow the user to execute any trade or employ any strategy, whether a strategy common to the industry or personally devised, while using the trading system.

Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kane in view of The Handbook, as in Claim 28, and in further view of Martyn (US Patent 6,195,647).

Regarding Claim 34, Kane discloses a method of computerized trading with algorithm plug-ins.

Neither Kane nor The Handbook teaches a method of computerized trading wherein the selecting of one of the algorithm plug-ins includes selecting a selection from a pull-down menu.

Martyn discloses a method of computerized wherein the selecting of one of the functions includes selecting a selection from a pull-down menu. ("Menu bar includes several pull-down menus..." – see col. 4, lines 48 – 49 and figure 3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Kane and The Handbook by incorporating the ability for selecting the desired selection from a pull-down menu, as was done by Martyn, to make the trading system user friendly.

Response to Arguments

Applicant's arguments with respect to the pending Claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Art Unit: 3628

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The references cited to Lupien (U.S. Patent 5,101,353), and Levine (U.S. Patent 6,233,566), are considered to be structures relevant to the claimed invention due to their disclosure of computerized trading systems. Additional references include Bringing It Together (Ruggiero, M. & Vigliotti, A., *Bringing It Together. Futures*, vol. 28, no. 9 (Sept. 1999), p. 58 – 61) which discusses the benefits of modular trading system design, Hedges For Better Equity Management (Ziperski, J. & Brake, G., *Hedges For Better Equity Management. Corporate Finance*, no. 163 (June 1998), p. 44 – 46) which discusses hedging strategies, including the gamma hedge, and The Handbook (p.351-352) which discusses computerized recovery mechanisms.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 3628

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Borlinghaus whose telephone number is (703) 308-9552. The examiner can normally be reached on 8:30am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sough can be reached on (703) 308-0505. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



HYUNG SOUGH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600